

Saga of a sage scientist

Jayant Narlikar reviews Jagjit Singh's book on the life and times of Nobel Prize winning Pakistani theoretical physicist, Abdus Salam

There are people whose autobiographies are literary successes, there are a few whose efforts in the same direction are a bore. And there are a few others who haven't written them yet but who should. Abdus Salam falls in this last category. The success story of a boy from a small market town in the Indian sub-continent (now in Pakistan) who became a scientist of international repute, bagging the Nobel Prize, would be not only inspiring in itself but, coming from the horse's mouth, tell us of the agonies and ecstasies of a creative and ambitious mind.

Still, Salam has chosen not to write one, and we have to do with a biography instead. I am glad that the attempt was made by a science writer of proven credibility. Even so the Kalinga award-winning author is all humility when approaching the task. He writes in the preface: "I wish Salam could give us a self-portrait by reciting reminiscences of his life.... But as he has chosen not to do so, I offer a wholly inadequate substitute for what it is worth.... What I have sought to do is to draw as sharply defined a picture as I could of his work and character as well as of the personalities and events that exercised a decisive influence upon it."

The book reflects this assertion fairly faithfully. Beginning at *The Beginning* the author takes us through Salam's formative years in his native town Thang and then Lahore ending

with his arrival in Liverpool on a cold misty morning. This is followed by *Life at Cambridge* as a student of the Tripos examinations and the launching into a research career as a theoretical physicist. *The return of the Native* describes Salam's sincere but unsuccessful attempt to pursue that career at Lahore as the Head of the Mathematics Department at the Government College. After spending just over two years he was back in Cambridge as *The Exile Abroad*.

These were the important years in shaping Salam's subsequent career. On the one hand he was drawn to his country, wishing to raise the quality of life there through inputs to education as well as science and technology. The author divided his interaction with the government of Pakistan into three phases which are self explanatory: (i) years of oblivion when he was forgotten by his native land, (ii) the years of innocence and hope when he was discovered and idolized, followed by (iii) the years of growing frustration and despair. But his concern with Pakistan during these years was more like looking over his shoulders while his sights were set on creativity in particle

physics. His Ph.D work on quantum electrodynamics was followed by highly perceptive forays into strong and weak interactions including parity violation for which he came close to the Nobel Prize. That was to come, however, two decades later for his work on the unification of electrodynamics and weak interactions.

The author very well handles these technical accounts in the following six chapters. While Salam has already created a niche for himself in the annals of science, he has been more than a scientist. The author calls him a sage scientist, the sage in him reflecting his commitment to the developing nations, to creating an ethos of science and technology in hitherto barren surroundings. The last seven chapters aptly describe this commitment that drove the sage to all corners of the globe, using persuasion and rhetoric in international forums, before heads of governments — wherever that action might possibly lead to results. Did it yield any results? Although the author concludes with these words: "Salam too is as active as ever and on the move despite his affliction. The only discernable change is that his global con-

cerns... seem now to him lost causes." For a perfectionist like Abdus Salam this may appear so. To a whole generation of scientists from numerous countries his efforts for them have created that great asset called 'hope.'

There are a number of anecdotes about Salam's life that not only scientists but lay readers would also find absorbing. Particularly touching is how, expectedly he, as a raw student landing in England, received help from Sir Mohammed Zafarullah Khan, an eminent jurist who had come to Liverpool to receive his nephew travelling by the same boat. Another is about his close brush with a possible Nobel Prize when he withdrew from the Editor's hands a paper that would have staked his claim for it — because of criticism from the great Wolfgang Pauli.

The series of coincidences that conspired to help Salam to go to Cambridge make one wonder not so much at what would have happened if these had not come about but whether there are other similar brains languishing in the developing countries for want of such opportunities. Statistics assure us that scientists of the Nobel class

don't grow by the dozen; but are we losing a few for want of opportunities? The reader may speculate on the issue.

But this does highlight the importance of Salam's efforts at setting up centres like the ICTP. Although in spite of his religious convictions, Salam's efforts in this field covered non-Islamic as well as Islamic countries, the Table 1 of Appendix F in the book curiously enough presents data only on the latter. How many visitors came to ICTP during 1970-85? Table I tells us that Egypt with 691 leads the list of Arab-Islamic countries. It was only after searching through Table III that one discovers that the number from India was nearly double, at 1,286.

On the production side the book could have been made more attractive by adding more photographs from Salam's life. Even those that are included could have been better reproduced. There is a curious error on the first page. Under the title 'Abdus Salam' there is a brief description about Jagjit Singh.

With many 'pluses' for this book, the one 'minus' that I can point to is the lack of personal rapport between the author and the subject of the biography. As a result the reader also feels as if he is viewing a great personality from afar. This makes one wish (along with the author) that Salam would one day write about himself.

Abdus Salam: A biography by Jagjit Singh, Penguin, 1992, pages 213, Rs 125